NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: Nevada Department of Corrections
P.O. Box 7011
Carson City, NV 89702

Permit Number: NEV94016

Location: Humboldt Conservation Camp (Rose Creek)
8105 Conservation Road
Winnemucca, Nevada 89446 (Humboldt County)
Latitude: 40° 54' 03"N, Longitude: 117° 55' 15"W
Latitude/Longitude at Approximate Center of Camp
Township 35N, Range 36E, Section 22

General: The Nevada Department of Corrections (NDOC) submitted a complete application for renewal of Nevada groundwater discharge permit NEV94016, Humboldt Conservation Camp (HCC) sewage treatment disposal system on October 4, 2006.

The NDOC operates the Humboldt Conservation Camp (HCC; originally built in 1985), which is located one mile north of U.S. I-80, 10 miles southwest of Winnemucca. HCC is a minimum-security prison camp designed for a population of 150 inmates and approximately twelve (12) NDOC staff. The Nevada Division of Forestry (NDF) with ten (10) staff operates a satellite facility, consisting of a garage and small office (with a sink and toilet) and is connected to the camp sewer system.

The sewage disposal system is a modified activated sludge pond system. NDOC-HCC uses components of the original septic system, i.e., the grease interceptor, septic tanks, lift station and leachfields with the addition of an activated sludge (denitrifying) pond. The NDOC-HCC provides preliminary treatment using existing septic tank #1. Following pretreatment the wastewater flows into the existing lift station where it is pumped into an HDPE (60 mil) lined 70’ by 90’ oval pond, 10’ in depth. Water level is maintained between 6.1’ and 7.1’. Two 5 HP and one 7.5 HP aspirating aerators are provided in the pond. Additionally a sludge pump is installed in the pond to transfer sludge to septic tank #2 where it will be stored until it is removed by a licensed septic tank pumping contractor and transferred to an approved landfill or land application site. The pond is operated in a plug flow mode consisting of three phases encompassing anoxic/aerated phases, and settle and decant phases. The aerators are cycled OFF and ON throughout the day (20 hours per day) to create the anoxic/aerated phase. The settling phase takes two hours and the decant phase, two hours. The decanted effluent is pumped to existing leachfields.

Receiving Water Characteristics: The receiving waters are the groundwaters of the State of Nevada. Depth to the groundwater at the location of the production well is approximately sixty (60) feet. The production well is downgradient from the existing, in-use leachfield. Groundwater at this location is potable, however in 1997 nitrate concentrations increased to 7.0 mg/L, likely a result of effluent migration from the leachfield.

The applicant reports groundwater flows north towards the nearby Humboldt River. Groundwater monitoring wells have been installed north and south, respectively, of the existing, in-use leachfield. The north monitoring well, downgradient from the leachfield, has exceeded safe drinking water standards (up to 28 mg/L nitrate, average 22 mg/L, January 2005 to June 2006).

Flow: The Permittee has requested an increase in the 30-day average flow limit to 0.025 million gallons per day (MGD). The increase in flow cannot be granted at this time, as no supporting data was submitted to justify the increase. The design capacity for this system will remain at 0.021 MGD. A 30-day average flow is therefore limited to 0.021 MGD with a daily maximum flow of 0.032 MGD. The 30-day average flow from January 2005 through June 2006 was 0.019 MGD.

Proposed Effluent Limitations and Special Conditions:

Table 1: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD	0.021	0.032	Monthly	Lift Station Pumping Time
CBOD, mg/L (Effluent at decant pump)	30	45	Monthly	Discrete
TSS, mg/L (Effluent at decant pump	30	45	Monthly	Discrete
Total Nitrogen as N, mg/L, (Effluent at decant pump)		10``````````976	Monthly	Discrete
Sludge & Scum Depth, feet or inches (Tank #1 Inlet)	Monitor & Report		Monthly	Discrete Measurement
Grease Depth, feet or inches (grease interceptor)	Monitor & Report		Monthly	Discrete Measurement
Sludge & Scum Depth, feet or inches (Tank #2 Inlet)	Monitor & Report		Monthly	Discrete Measurement
pH (effluent at decant pump)	6.0 to 9.0 Standard Units		Monthly	Discrete
Inmate Population, # of persons	Monitor & Report		Monthly	Population Count

Table 2 –Groundwater Monitoring

PARAMETER	DISCHARGE LIMITATIONS	SAMPLE LOCATIONS	Measurement Frequency	MONITORING REQUIREMENTS
				Sample Type
TDS, mg/L	Monitor & Report	PW	Quarterly	Discrete
		NMW; SMW	Monthly	Discrete
Chlorides, mg/L	Monitor & Report	PW	Quarterly	Discrete
		NMW; SMW	Monthly	Discrete

Nitrate as N, mg/L	Monitor & Report	PW	Quarterly	Discrete
		NMW; SMW	Monthly	Discrete
Total Nitrogen as N, mg/L	Monitor & Report	PW	Quarterly	Discrete
	10.0	NMW; SMW	Monthly	Discrete
Depth to Groundwater (ft)	Monitor & Report	NMW; SMW	Quarterly	Field Measurement
Leachfield Piezometers (Effluent Depth, ft)	Monitor & Report	NMW; SMW	Quarterly	Field Measurement

NMW: North Monitoring Well; SMW: South Monitoring Well; PW: Production Well

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the administrator, including in said implementation and compliance, any additions or modifications which the administrator may make in approving the schedule of compliance. The Permittee shall implement and/or execute the following schedule of compliance requirements:

- Within ninety (90) days **(Month XX, 2007)** of the permit issuance date, the Permittee shall submit a revised Operations and Maintenance (O&M) Manual for operation of the activated sludge pond system.

Rationale for Permit Requirements: The NDEP's rationale for the proposed monitoring conditions is as follows:

- *Septic Tank/Grease Interceptor Monitoring*: The permit requires monthly monitoring of the sludge, scum, and liquid level depths in septic tanks #1 and #2 and the grease level in the grease interceptor. The tanks and the interceptor must be monitored so that the proper frequency of pumping can be maintained. Excess grease in the interceptor will overflow into septic tank #1 and then into the pond. Grease in the leachfield will result in premature failure of the leachfield. Excess sludge in septic tank #2 could result in an emergency overflow/bypass.

- *Flow*: Flow is tracked to ensure that adequate treatment design capacity is not exceeded.

- *Groundwater Monitoring*: The drinking water limit for nitrate is 10.0 mg/L. The Division has applied standard groundwater permit language requiring that the permittee provide an alternative method of effluent disposal if well nitrate levels reach 7.0 mg/L. Based on monitoring data results from the monitoring and supply wells, leachfield disposal has exceeded the existing permit requirements for groundwater nitrate.

Procedures for Public Comment: The Notice of the NDEP's intent to issue (renew) a permit authorizing the facility to discharge activated sludge pond effluent into the groundwater via leachfield percolation, subject to the conditions contained within the permit is being sent to the **Humboldt Sun** and the **Reno Gazette Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do

so in writing for a period of thirty (30) days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline at the Division for receipt of all comments pertaining to this public notice period is **5:00 PM on February 12, 2007.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue the proposed groundwater discharge permit for a period of five (5) years.

Prepared by: James T. Hogan
Staff Engineer II
Bureau of Water Pollution Control
January 2007